Agenda For March 16, 2017 Prehearing Conference In A.17-01-020, A.17-01-021, and A.17-01-022

1. Introduction
   a. Opening remarks.
   b. Emergency Procedures: In case of an emergency, use appropriate exit doors, cross McAllister Street and assemble at the park on Van Ness Avenue between the War Memorial Building and Opera House (opposite City Hall) until cleared to return.
   c. Commissioner's Opening Remarks.

2. List of Appearances and Creation of Service List
   a. See Attachment 1 for list of Protests/Responses to each Application, and Motions requesting Party Status (missing anyone?)
   b. Fill out appearance form at PHC and indicate on appearance form (on the proceeding number) what application(s) you want to be a party to.
   c. Create single service list for use in all three applications.

3. Should three applications be consolidated?

4. Discussion of Procedural Issues For Processing Priority and Standard Review Projects
   a. Applications lack information that the ACR directed be provided as noted by Energy Division (see Attachment 2), and some parties contend that applications do not comply with certain of the ACR requirements.
      (1) How should lack of information be handled, i.e., what should be the vehicle for resolving this additional information, and providing an opportunity for parties' comments on the additional information. (For data gaps in Attachment 2, a ruling may issue.)
   b. Discussion of priority review and standard review proposed projects. (Due to size and scope of the different projects and resources, should we focus on priority review first, with another PHC later to focus on standard review projects or should a firm or tentative schedule be adopted at the same time for standard review).
      (1) Various parties have commented on how the priority review process should be handled before a proposed decision is issued such as: two round of comments, or suggestions to hold a workshop followed by a comment process; are there any priority projects that parties do not object to; what is considered "non-controversial" (subjective or objective); should some priority review projects be subject to a lengthier review process; are evidentiary hearings needed for the priority review projects and when should the determination be made as to whether evidentiary hearings are needed for the priority review projects.
      (2) How should the review process for the standard review projects take place?
         (a) Should each utility's standard review projects be addressed in separate evidentiary hearings?
         (b) Is there testimony common to all three standard review applications, such as developing common methodologies or metrics for determining emission reductions, or on other issues?

c. Are Public Participation Hearings needed for priority review and/or standard review projects, and if so, should a process other than the bill insert notice process be used? (See PUC § 1711.)

5. Discuss scope of issues for priority review projects. (See Attachment 3 for proposed scope of issues for priority review projects.)

6. Discuss scope of issue for standard review projects. (See Attachment 3 for list of proposed scope of issues for standard review projects.

7. Discuss procedural schedule for priority review and standard review. (Utilities, ORA, TURN, and CCUE have proposed specific schedules, any other suggestions by other parties.)

8. Creation of working group for communication protocols. (See Attachment 4, and PUC §§ 740.2(e) and 740.3(a)(2).) Persons interested in participating on working group should send e-mail to Amy Mesrobian (Amy.Mesrobian@cpuc.ca.gov) and Carolyn Sisto (Carolyn.Sisto@cpuc.ca.gov) of the Energy Division.

9. Any other issues to discuss?

10. Adjournment.

Attachment 1

Protests/Responses to the Applications

A.17-01-020 (SDG&E)	**A.17-01-021 (SCE)**	**A.17-01-022 (PG&E)**
Alliance of Automobile Manufacturers and General Motors (Joint Automakers)	Alliance of Automobile Manufacturers and General Motors (Joint Automakers)	Alliance of Automobile Manufacturers and General Motors (Joint Automakers)
American Honda Motor	American Honda Motor	American Honda Motor
California Transit Association	California Transit Association	California Transit Association
	CALSTART	CALSTART
	Center for Community Action and Environmental Justice and East Yard Communities for Environmental Justice	
Center for Sustainable Energy	Center for Sustainable Energy	Center for Sustainable Energy
ChargePoint, Inc.	ChargePoint, Inc.	ChargePoint, Inc.
	City of Lancaster	City of Oakland
	City of Long Beach	
Clean Energy Fuels Corp.	Clean Energy Fuels Corp.	Clean Energy Fuels Corp.
Coalition of California Utility Employees	Coalition of California Utility Employees	Coalition of California Utility Employees
Electric Vehicle Charging Assn.	Electric Vehicle Charging Assn.	Electric Vehicle Charging Assn.
Environmental Defense Fund	Environmental Defense Fund	Environmental Defense Fund
Envision Solar International	Envision Solar International	Envision Solar International
EVgo		EVgo
	Green Power Institute and Community Environmental Council	Green Power Institute and Community Environmental Council

A.17-01-020 (SDG&E)	A.17-01-021 (SCE)	A.17-01-022 (PG&E)
		Marin Clean Energy, and Sonoma Clean Power Authority
National Asian American Coalition, and the National Diversity Coalition	National Asian American Coalition, and the National Diversity Coalition	National Asian American Coalition, and the National Diversity Coalition
Natural Resources Defense Council	Natural Resources Defense Council	Natural Resources Defense Council
Nicholas Bowden	Nicholas Bowden	Nicholas Bowden
Office of Ratepayer Advocates	Office of Ratepayer Advocates	Office of Ratepayer Advocates
Oxygen Initiative (formerly KnGrid)		
Plug In America	Plug In America	Plug In America
San Diego Airport Parking Company		
Shell Energy North America	Shell Energy North America	Shell Energy North America
Sierra Club	Sierra Club	Sierra Club
	South Coast Air Quality Management District	
	Southern California Gas Company	
Tesla, Inc.	Tesla, Inc.	Tesla, Inc.
The Greenlining Institute	The Greenlining Institute	The Greenlining Institute
The Utility Reform Network	The Utility Reform Network	The Utility Reform Network
Utility Consumers' Action Network		
Motion for Party Status	**Motion for Party Status**	**Motion for Party Status**
Electric Vehicle Charging Assn.*	Electric Vehicle Charging Assn.*	Electric Vehicle Charging Assn.*

A.17-01-020 (SDG&E)	A.17-01-021 (SCE)	A.17-01-022 (PG&E)
	South Coast Air Quality Management District*	Santa Clara Valley Transportation Authority
	EVgo	

* See Rule 1.4(a)(2) of the Commission's Rules of Practice and Procedure.

Attachment 2

Data Gaps in IOU SB 350 Transportation Electrification Applications

The guidance ruling (Appendix A of the Assigned Commissioner Ruling) identified the minimum project descriptions that each IOU's proposed project should include within the application. There are several omissions of data in the following categories:

- **Vehicle goals**
    - The utilities generally provide the number of vehicles supported by their proposed priority review projects, and those numbers are mostly expected to be small. SDG&E also shows the total number of vehicles supported by its proposed standard review project as well as the number that are incremental due to the program.
    - For the standard review projects, the IOUs have not explained how the scale of proposed programs relates to utility GHG emissions reduction target for their territory.
    - SCE and PG&E vehicle goals for their standard review projects are not defined.
        - SCE's Medium- and Heavy-Duty Charging Infrastructure Program (standard review) does not estimate the number of vehicles that could be served by this infrastructure program. In Appendix D, SCE provides estimates of vehicle adoption in its territory, but it is not clear if those are inclusive of SCE's proposed TE programs, and what number SCE is attributing to its proposed programs.
        - PG&E forecasts non-light duty vehicles in its territory, but it is unclear how much of that is attributable to their proposed Fleet Ready program; PG&E's proposal seems to be framed as meeting projected vehicle adoption, not at driving additional vehicle adoption. PG&E does not have a vehicle goal for the DCFC proposal.
- **Cost**
    - All utilities should provide workpapers in Excel format to show the cost assumptions used to develop the project budgets. These should detail capital costs and expenses for the projects.
- **Grid Impacts**
    - SCE and PG&E have not assessed the grid impacts of their standard review proposals.
    - SDG&E commissioned a study of the grid impacts of managed and unmanaged charging scenarios resulting from its standard review proposal.
- **Emissions benefits and accounting methodology**
    - PG&E has not attempted to quantify the GHG emissions or air pollution reductions specific to its proposed programs.
    - All utilities need to clarify the methodology they used for GHG accounting.
        - SCE used its PLEXOS model to compare the GHG emissions associated with an ARB scenario versus SCE's internal forecast to determine a net GHG savings across the energy and transportation sectors. It's not clear why SCE is

comparing those two scenarios to estimate GHG emissions reductions. Also forecasts NO_x emissions reductions associated with adoption of non-light duty vehicles.
        - PG&E appears to have calculated CO_2 emissions reductions from all forecast non-light duty vehicles in its territory.
        - SDG&E calculates CO_2, NO_x, and VOC emissions reductions associated with its proposed standard review project.
- **Leverage the results of previous pilots**
    - Generally, the utilities did not provide much explanation of previous pilots they would leverage to develop their proposed programs. The utilities did not explain what kind of background or literature research they conducted before proposing programs.
- **Safety**
    - IOU proposals did not include substantial safety sections. CPUC's Safety and Enforcement Division will be working with the utilities to identify safety risks and develop a safety plan.

Attachment 3

Proposed Scope of Issues For Priority Review Projects

1. Do the proposed priority review projects meet the SB 350 requirements for TE? (See Public Utilities Code [PUC] §§ 740.12, 740.3, and 740.8 – e.g., impact on competition including utility ownership of electric vehicle service equipment; impact on disadvantaged communities (including what definition of a disadvantaged community be used); ratepayer subsidy and equity issues versus leveraging funding by other sources; ratepayer interests; whether objectives of projects will lead to scalability, i.e., widespread transportation electrification; and how do these proposed projects align with California's zero emission vehicles initiatives? (e.g., See Health and Safety Code § 44258 and following; September 14, 2016 Assigned Commissioner's Ruling (ACR), at 25-26.)
2. Is there a need to amend the priority review projects, and what should be the process to accomplish that? (e.g., data gaps noticed by Energy Division; overhead costs included in cost; lacking certain information as noted by other parties; further explanation of project benefits; how disadvantaged communities will benefit; have other available program monies been leveraged; quantifying emissions reductions from projects.)
3. Do the priority review projects meet the criteria set forth in the ACR?
4. Do the priority review projects address the safety concerns set forth in PUC §§ 740.8(a) and 740.12(b)?
5. Have the priority review projects addressed the rate design issues raised by various parties? (e.g., demand charges, mandatory vs. optional participation.)
6. What specific ratepayer benefits will result from the proposals? (See PUC § 740.8.)
7. Are the proposed priority projects reasonable and in the ratepayers' interests? (See PUC §§ 740.3 and 740.8.)
8. What kind of data gathering and reporting requirements should be imposed?
9. What kind of cost recovery mechanisms (e.g., balancing account) should be adopted for these priority review proposals?

Proposed Scope of Issues For Standard Review Projects

1. Are the proposed priority projects reasonable and in the ratepayers' interests? (See PUC §§740.3 and 740.8.) This includes review of whether and how the utilities have:
    a. Complied with the statutory standard of review established by SB 350?
    b. Identified specific ratepayer benefits resulting from the proposals? (See PUC §740.8.)
    c. Ensured that ratepayers benefits by customer class are commensurate with the costs they will bear from the proposals?
    d. Facilitated access by disadvantaged communities to transportation electrification infrastructure through their program design?
    e. Allowed participation by customers of Community Choice Aggregators and Energy Service Providers in the proposals?
    f. Designed programs that support statewide electrification?

g. Quantified the expected GHG emissions reductions from the proposals?
h. Explained how the scale of proposed programs relates to utility GHG emissions reduction target for their territory?
i. Designed the programs in a manner that will not negatively affect competition?
j. Designed the programs in a manner that leverages non-ratepayer funding sources?
k. Ensured that stranded infrastructure costs will be avoided?
l. Addressed the safety concerns set forth in PUC §§740.8(a) and 740.12(b)?
m. Ensured the programs reduce emissions and comply with state and federal health regulations?
n. Supported grid integration of electric vehicles by proposing appropriate rate designs?
o. Integrated appropriate marketing, education, and outreach into the programs?

2. Should the proposed revenue requirement, cost recovery (including balancing account proposal) standard of review, and rate designs associated with the standard review programs be approved?

Attachment 4
Vehicle-Grid Integration Communications Protocol Working Group

CPUC and CEC Staff Straw Proposal 3/9/17

Objective: The California Public Utilities Commission, California Energy Commission, and other State agencies will assess how and whether the adoption of a communications protocol is necessary to enable Plug-In Electric Vehicle-Grid Integration (VGI) resources to more economically participate in electricity markets at scale.

Strategy: Form a working group to identify and assess opportunities in which VGI can create value from multiple market participants' perspectives, communication protocols needed to deliver that value, and concepts for how utilities, automakers, electric vehicle service providers, aggregators, and others can develop pathways to market for a VGI resource. The working group will allow participants to review, understand, and discuss the technical details of existing communication protocols. The recommendations of the working group will be considered and incorporated in CPUC's Rulemaking 13-11-007 (and/or the SB 350 Transportation Electrification applications A.17-01-020, A.17-01-021 and A.17-01-022) and the Energy Commission's Integrated Energy Policy Report (IEPR) proceeding for future policy decisions.

Questions for Working Group to consider:

Review of current landscape and problem

1. Review research that has been conducted in California and globally by utilities, automakers, charging companies, and others related to VGI. What lessons learned from the research are relevant to working group activities?
2. Review existing and identify any additional potential VGI use cases.[1] How can customers, third parties, and utilities extract value from these use cases?
3. Review the current technical and economic barriers to implementing VGI use cases. Identify any market barriers that may be addressed by state action.
4. What frameworks, outcomes, or criteria have prior studies employed to analyze the functionalities, costs, efficiency, interoperability, (or other factors) of VGI communications protocols?

Identification and discussion of communications protocols

5. Review the existing applicable communication protocols.
    a. For a VGI resource regulated at the EVSE, how can different communication protocols enable a pathway to utility markets for the VGI product?
    b. For a VGI resource regulated at the EV, how can different communication protocols enable a pathway to utility markets for the VGI product?

[1] The California Vehicle-Grid Integration Roadmap (2014) identified "value of VGI" as one of three barriers and identified "refining use cases" as an action item. Roadmap is available at: https://www.caiso.com/Documents/Vehicle-GridIntegrationRoadmap.pdf.

    c. What are the pros and cons of each communication protocol?
6. What are the existing or proposed network architectures for VGI? How are existing network architectures designed to host communication protocols in the devices needed for VGI? What are the pros/cons of each architecture? Can these architectures support multiple communication protocols?
7. Can selecting an open-source network architecture enable the market to test, implement, and continually improve multiple protocols while maintaining simplicity for drivers? What are the implications of architecture design for market participants manufacturing devices?
8. How do proposed protocols fit within the larger context of communications between vehicles, EVSE, the grid, utilities, automakers, EVSPs, and other distributed energy resources?

Implementation & pathways to market

9. How have IOUs tested whether proposed protocols/architectures are effective in facilitating VGI and what improvements should be made to enable scale? What contractual terms and conditions should utilities include in procurement or other programs to ensure EVs can provide grid value?
10. What technology, hardware, and/or software is currently available to test the proposed protocols? Where are technology gaps?
11. How do automakers, charging providers, and IOUs measure the value of the proposed protocols and whether implementation will be cost-effective? How could market participants measure cost-effectiveness?

Scope:

- Focuses primarily on light duty vehicles, but seeks synergies with the medium duty and heavy duty vehicles sector.
- Assesses existing protocols or standards as defined and/or anticipated today, does not attempt to develop a new protocol.
- Relates to CPUC/IOU or other state agency investments in transportation electrification. For example, if the CPUC adopts a protocol, it would mean that future IOU investments in transportation electrification must be compatible with that protocol. It would not preclude the use of additional protocols.

Working Group Participants:

- State Sponsors: Public Utilities Commission, Energy Commission, Air Resources Board, and Governor's Office of Business and Economic Development.
- Facilitator: Independent technical expert (engineer) with experience in facilitation who is not a party to any CPUC proceedings, or existing recipient of State funding related to transportation electrification or alternative-fueled vehicles.
- Participants: Utilities, automakers, EV service providers, ratepayer advocates, nonprofits, participants in standards development, and other interested groups.

Timing:

- March 2017: establish working group.

- April-September 2017: facilitator holds bi-weekly conference calls.
- October 2017: facilitator will prepare and submit report of working group recommendations to the service list.

November 2017: Parties may submit comments